

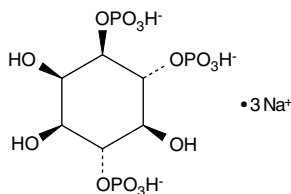
# Product Information



## D-*myo*-Inositol-1,4,6-triphosphate (sodium salt)

Item No. 10008427

**CAS Registry No.:** 157380-18-2  
**Formal Name:** D-*myo*-inositol-1,4,6-tris(dihydrogen phosphate), trisodium salt  
**Synonyms:** Ins(1,4,6)-P<sub>3</sub>, 1,4,6-IP<sub>3</sub>  
**MF:** 486.0  
**FW:** C<sub>6</sub>H<sub>12</sub>O<sub>15</sub>P<sub>3</sub> • 3Na  
**Purity:** ≥98%  
**Stability:** ≥2 years at -20°C  
**Supplied as:** A lyophilized powder



### Laboratory Procedures

For long term storage, we suggest that D-*myo*-Inositol-1,4,6-triphosphate (sodium salt) (Ins(1,4,6)-P<sub>3</sub>) (sodium salt) be stored as supplied at -20°C. It will be stable for at least two years.

Ins(1,4,6)-P<sub>3</sub> (sodium salt) is supplied as a lyophilized powder. Ins(1,4,6)-P<sub>3</sub> is sparingly soluble in organic solvents. For biological experiments, we suggest that organic solvent-free aqueous solutions of Ins(1,4,6)-P<sub>3</sub> (sodium salt) be prepared by directly dissolving the Ins(1,4,6)-P<sub>3</sub> (sodium salt) in water. The solubility of Ins(1,4,6)-P<sub>3</sub> (sodium salt) in water, is approximately 50 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Ins(1,4,6)-P<sub>3</sub> is a member of the inositol phosphate (InsP) family that play critical roles as small, soluble second messengers in the transmission of cellular signals.<sup>1,2</sup> The most studied InsP, Ins(1,4,5)-P<sub>3</sub>, is a second messenger produced in cells by phospholipase C (PLC)-mediated hydrolysis of phosphatidylinositol-4,5-bisphosphate.<sup>3,4</sup> Binding of Ins(1,4,5)-P<sub>3</sub> to its receptor on the endoplasmic reticulum results in opening of the calcium channels and an increase in intracellular calcium.<sup>4,5</sup> Ins(1,4,6)-P<sub>3</sub> (tested as the meso compound) is 9-fold less potent than Ins(1,4,5)-P<sub>3</sub> at initiating Ca<sup>2+</sup> release when injected into *Xenopus* oocytes.<sup>6</sup>

### References

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2. Majerus, P.W. Inositol phosphate biochemistry. *Annu. Rev. Biochem.* **61**, 225-250 (1992).
3. Streb, H., Irvine, R.F., Berridge, M.J., *et al.* Release of Ca<sup>2+</sup> from a nonmitochondrial intracellular store in pancreatic acinar cells by inositol-1,4,5-trisphosphate. *Nature* **306**, 67-69 (1983).
4. Yoshida, Y. and Imai, S. Structure and function of inositol 1,4,5-triphosphate receptor. *Jpn. J. Pharmacol.* **74**, 125-137 (1997).
5. Exton, J.H. Regulation of phosphoinositide phospholipases by hormones, neurotransmitters, and other agonists linked to G proteins. *Annu. Rev. Pharmacol. Toxicol.* **36**, 481-509 (1996).
6. DeLisle, S., Radenberg, T., Wintermantel, M.R., *et al.* Second messenger specificity of the inositol trisphosphate receptor: Reappraisal based on novel inositol phosphates. *Am. J. Physiol. Cell Physiol.* **35**, C429-C436 (1994).

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